

WHAT IS CLAIMED IS:

1. An immunogen comprising an isolated polypeptide whose amino acid sequence comprises at least one epitopic peptide selected from the group consisting of SEQ ID NOS: 1 - 20 and wherein when the epitopic peptide is one of SEQ ID NO: 17-20 said polypeptide does not include MAGE 4 or MFG-E8 proteins.

2. The immunogen of claim 1 wherein said polypeptide comprises at least two of said epitopic peptides.

3. The immunogen of claim 1 wherein said polypeptide comprises at least three of said epitopic peptides.

4. The immunogen of claim 1 wherein said polypeptide comprises at least four of said epitopic peptides.

5. The immunogen of claim 1 wherein said epitopic peptide differs from SEQ ID NOS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 or 20 but wherein said difference is no more than one amino acid unit.

6. The immunogen of claim 5 wherein said one amino acid difference is the result of a conservative amino acid substitution.

7. The immunogen of claim 6 wherein said substitution is the substitution of one hydrophobic amino acid unit by another hydrophobic amino acid.

8. The immunogen of claim 5 wherein said amino acid difference is the addition or deletion of one amino acid to or from said oligopeptide.

9. An immunogen comprising a member selected from the group consisting of Mage D protein and an immunologically active fragment of Mage D protein.

5 10. A polynucleotide comprising a polynucleotide selected from the group consisting of:

(a) a polynucleotide that encodes a polypeptide selected from the group consisting of the polypeptides of claims 1, 2, 3, 4, 5, 6, 7, 8, and 9, and

(b) the full complement of (a).

10 11. The polynucleotide of claim 10 wherein the polynucleotide of (a) is a DNA.

12. The polynucleotide of claim 10 wherein the polynucleotide of (a) is an RNA.

13. A vector comprising a polynucleotide of claim 10.

15 14. A mammalian cell comprising the vector of claim 13 and expressing said polynucleotide.

15. A vaccine composition comprising an immunogen of claim 1, 2, 3, 4, 5, 6, 7, 8, or 9 present in a pharmaceutically acceptable carrier and in an amount sufficient to elicit production of antibodies or cells that react with said immunogen when said immunogen is administered to an immunologically competent animal.

20 16. An antibody specific for an immunogen of claim 1, 2, 3, 4, 5, 6, 7, 8 or 9.

17. A process for inducing a cytotoxic T lymphocyte (CTL) *in vitro* that is specific for a tumor cell expressing HLA-A1 comprising contacting a precursor CTL with an immunogen of claim 1 under conditions that generate a CTL response to the tumor cell.

5           18. A process for inducing a CTL response *in vitro* that is specific for a tumor cell expressing HLA-A1, said process comprising contacting a precursor CTL with a mammalian cell of claim 14.

10           19. A process for treating a subject with cancer characterized by tumor cells expressing HLA-A1, said process comprising administering CTLs induced by the processes of claims 17 or 18 in an amount sufficient to destroy the tumor cells through direct lysis or to effect the destruction of the tumor cells indirectly through the elaboration of cytokines.

15           20. A process for treating a cancer-afflicted subject characterized by tumor cells expressing any class I MHC molecule and a gene coding for an epitopic sequence of at least one of SEQ ID NO: 17 - 20, whereby the CTLs of claim 17 are administered in an amount sufficient to destroy the tumor cells through direct lysis or to effect the destruction of the tumor cells indirectly through the elaboration of cytokines.

20           21. A process for inducing a cytotoxic T lymphocyte (CTL) *in vitro* that is specific for a tumor cell expressing HLA-A2 comprising contacting a precursor CTL with an immunogen of claim 1 under conditions that generate a CTL response to the tumor cell.

25           22. A process for inducing a CTL response *in vitro* that is specific for a tumor cell expressing HLA-A2, said process comprising contacting a precursor CTL with a mammalian cell of claim 14.

23. A process for treating a subject with cancer characterized by tumor cells expressing HLA-A2, said process comprising administering CTLs induced by the processes of claims 21 or 22 in an amount sufficient to destroy the tumor cells through direct lysis or to effect the destruction of the tumor cells indirectly through the elaboration of cytokines.

24. A process for treating a cancer-afflicted subject characterized by tumor cells expressing any class I MHC molecule and a gene coding for an epitopic sequence of at least one of SEQ ID NO: 1-16, whereby the CTLs of claim 21 are administered in an amount sufficient to destroy the tumor cells through direct lysis or to effect the destruction of the tumor cells indirectly through the elaboration of cytokines.

25. The process for claims 19, 20, 23 or 24 wherein said cancer is carcinoma.

26. The process for claims 19, 20, 23 or 24 wherein said cancer is ovarian carcinoma.

27. A process for inducing a CTL response in a subject, said process comprising administering at least one immunogen of claim 1, 2, 3, 4, 5, 6, 7, 8 or 9, including combinations thereof, to an HLA-A1 positive subject and in an amount sufficient to induce a CTL response to tumor cells expressing HLA-A1.

28. A process for inducing a CTL response in a subject, said process comprising administering at least one immunogen of claim 1, 2, 3, 4, 5, 6, 7, 8 or 9, including combinations thereof, to an HLA-A2 positive subject and in an amount sufficient to induce a CTL response to tumor cells expressing HLA-A2.